

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, May 9, 2003

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Bringing forensic science to life

Robert Lawrence, son of Lab cofounder Ernest Lawrence, presented "Medical Aspects of Death Investigation" Tuesday at the Lab. Lawrence is a board certified anatomic, clinical and forensic pathologist and has been serving as a forensic pathologist for the Coroner's Office in San Joaquin County for 30 years. He has performed more than 7,000 autopsies and testified in court hundreds of times. Lawrence described actual cases to illustrate how forensic pathology is applied to determine the cause and circumstances of death.



JACQUELINE McBride/Newsline

Kuckuck receives Secretary's Gold Award

Bob Kuckuck, the former deputy director of Operations, has been awarded the Department of Energy's prestigious Secretary's Gold Award, the department's highest honor.

Kuckuck received the award from Ambassador Linton Brooks, administrator of the National Nuclear Security Administration, during an impromptu ceremony at NNSA headquarters last week.

"I'm overwhelmed," Kuckuck said. "I had no idea that they would do something like this and I

certainly feel very honored."

Kuckuck received the award in recognition of "superior leadership" as acting principal deputy administrator of NNSA, for "vision, dedication and commitment to excellence" that "have directly resulted in the advancement of initiatives that are strengthening the nuclear security of the United States of America," according to the award citation by Energy Secretary Spencer Abraham.

See KUCKUCK, page 8

JGI collaboration brings new technologies to bear on next genomic frontier

By Charles Osolin

NEWSLINE STAFF WRITER

The Joint Genome Institute (JGI) and Diversa Corp. (Nasdaq: DVSA) announced this week a collaboration to discover and sequence novel microbial genomes found in a diverse range of unique habitats.

Under the collaboration, Diversa will use its proprietary technologies to extract DNA from environmental samples and make gene libraries, while JGI will perform DNA sequencing. All DNA sequence data from the collaboration will be provided to Diversa and deposited in GenBank within six months of the completion of sequencing to allow public access by scientists around the world.

"The microbial world is the next genomic frontier," said JGI Director Eddy Rubin, M.D. "The human genome has been sequenced, and now we're ready to tackle the larger and more complex challenge of sequencing microbial diversity.

"We believe the scientific, environmental, and commercial benefits from this project will be considerable," Rubin continued, "and we're pleased to be working with Diversa, a company that has clearly demonstrated leadership in legally and efficiently accessing the vast microbial diversity present in the environment."

"There are more genes in a handful of soil than in the entire human genome," said Jay M. Short, president and chief executive officer of Diversa. "At Diversa, we are committed to developing products from the rich genomic resource of uncultured microbes living in nearly every environment on earth. We believe that our sequencing collaboration with JGI will contribute greatly to our understanding and utilization of microbial genes."

See **JGI**, page 8

Archivist puts experience to work making Laboratory's past more accessible

By Don Johnston

NEWSLINE STAFF WRITER

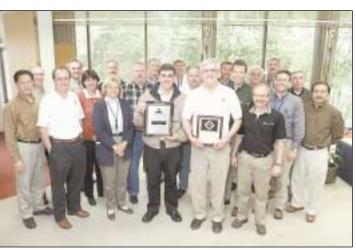
"Preserving the past and enabling the future" is the role Maxine Trost envisions for the Laboratory's

Trost is the first professionally trained archivist to head the Lab's archives and brings to her post a wealth of experience including the Carnegie Hall and Schubert theatres archives in New York City, the NYC public library system, the Massachusetts State Archive, and the American Heritage Center at the University of

See TROST, page 8

NIF sets new safety record

Members of Team NIF, including George Miller, associate director for NIF Programs (white shirt) and Ed Moses, NIF project manager (jacket), have celebrated another safety milestone. This past week, the project surpassed three-million work hours in 862 consecutive days without any lost workdays. This is equivalent to 1,500 worker years. During the last 12 months the total recordable rate (the number of accidents for every 100 worker-years of activity) has been reduced to approximately 1.00, considered to be a world-class safety record.

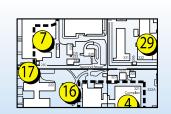


JACQUELINE McBride/Newsline



Racing across America

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Plant construction update

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— Insert

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Lab community news

Weekly Calendar

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Saturday 10 Almond Avenue School is hosting a Hawaiian-themed carnival from 10 a.m. to 3 p.m., featuring food, games, crafts, hula lessons and theme

baskets for sale. The carnival is a fund-raiser for the school, which is located at 1401 Almond Ave. The carnival is open to the public.

Tuesday 13

Tickets for LLESA's Family Day and Picnic at Marine World on Saturday, May 17, are available through today at the Time

Zone and cost \$26.50 per person. This price includes unlimited access to rides, shows and animal attractions. Park hours are 10 a.m. until 7 p.m. The picnic in the Lakeside picnic area is from 11 a.m. until 12:30 p.m. You will enjoy an all-you-can-eat lunch with all-beef hot dogs, ranch style beans, potato chips, fresh salad, ice cream sundaes, and soft drinks.

Thursday 15

The **Chinese American Networking Group** will be selling egg rolls at the Asian Pacific American Heritage Month Festival.

Egg rolls are \$1 each (regular or vegetarian) and may be ordered in advance through Eric Chow, 2-0552 or chow6@llnl.gov. All preorders may be picked up from 11:30 a.m. to 12:30 p.m. at the pool/lawn area.

Friday 16 A representative from California Casualty Insurance will be in the Benefits Office. Appointments are required and may be sched-

uled by calling 2-9955. California Casualty offers individual rates to Lab employees by payroll deduction for auto and homeowner/renter insurance. As with any employee-paid insurance coverage, employees are encouraged to comparison shop.



The Innovative Business and Information Services (IBIS) Department is offering an "Extensity Travel Expense Reports" training

opportunity for new users and/or infrequent users who need a general overview of the online travel expense reporting system. Four sessions of the "Extensity Expense Reports" course (BS3002) will be held in the Training Center (Trailer 1879) on: Wednesday, May 28, from 8:30 a.m. – noon and 1:15-4:30 p.m.; Thursday, May 29, from 8:30 a.m. – noon and 1:15 p.m. – 4:30 p.m. The course is free, but space is limited and participants must sign up in advance. To enroll, contact your LTRAIN training coordinator. Contact: Extensity Help-Desk, 3-5935.

The next session of water aerobics begins May 20. Shape up and stay cool with invigorating water exercise, a low impact aerobic and functional strength training workout for all fitness levels. Price is \$40 for a five-week session. Classes meet Tuesdays and Thursdays, 12:05-12:55 p.m. Sign-ups are on a first-come, first-served basis in the LLESA Office. Contact: LLESA, 2-9402.

A sign of things to come



DON JOHNSTON/NEWSLINE

As part of Deaf Awareness Week, Jennifer Ann Cook, a representative for MCI's outreach/education and marketing division, discussed a wide range of new technologies that are making it easier for deaf people to communicate in real time. She signed her entire talk, which was interpreted for the hearing members of the audience by Catherine McClain and Sheila Brager-Hall. Also, beginning and intermediate sign language classes began this week and continue through Wednesday, June 11. Classes are free and no registration is necessary. For more information, contact Carol Sandoli, 3-4385.

Festivities mark Asian Pacific heritage month

This year's celebration of Asian Pacific American Heritage Month, which began this week, con-

tinues Tuesday with a wonton-making workshop from 11:30 a.m. to 1 p.m. at Sandia in the Bldg. 940 auditorium.

The celebration also includes a festival at LLNL on Thursday from 11:30 a.m. to 1 p.m. in the pool/lawn area, featuring a variety of ethnic food, including Guamenian, Vietnamese, Filipino, Chinese and Korean. There will be Lion dance and Hawaiian dance presentations. The Kwan Do and or

sentations, Tae-Kwan-Do and cultural exhibits.

There also be a festival on May 28 at Sandia

featuring ethnic food and entertainment.

The month's activities will conclude with a keynote address at LLNL by U.S. Rep. Mike

Honda at noon, May 29, in the Bldg. 543 auditorium. Please note that previously published events and dates have changed.

Honda represents the 15th congressional district, which includes Silicon Valley. A native of California, Honda spent his childhood in an internment camp in Colorado during World War II. He was first elected in 1981 to the San Jose Unified School Board.

Since then, he has been elected to the Santa Clara County Board of Supervisors, the California Assembly and in 2000, was elected to the U.S.

House of Representatives.

For more information about LLNL events, contact Ricky Chau, 3-4388 or Punita Sinha, 2-0354; for Sandia events, call Grace Petines, 294-2904

IN MEMORIAM

Karol Kay Ruppenthal

Services will be held for Lab retiree Karol Kay Ruppenthal at 2 p.m. on Saturday at First Presbyterian Church, 4th and So. L streets in Livermore. She passed away Sunday at the age of 71.

Ruppenthal was the Bangor High valedictorian in 1950 and went on to earn her bachelor's degree at the University of Wisconsin. She earned her master's degree from Cal State University Hayward and in 1986, at the age of 54, earned her Juris Doctorate from John F. Kennedy University.

She worked at the Laboratory from 1965 to 1993. During her nearly three-decade career, she was deputy program manager in Affirmative Action and Diversity Programs, an employment programs supervisor and AA/EEO law advisor.

Ruppenthal's professional, social and volunteer organizations included being the first women president of the Civil Service Commission for Alameda County. She served on the board and was co-chair for the Tri-Valley Haven from 1987-1998, president of the board of directors of the Southern Alameda County Domestic Law Project in 1994; and had served on the board of the Dublin Senior Center Foundation since 1999.

She was a member of the American Association of University Women, Dublin Women's Club, Confederation of Women's Club's, League of Women Voters, Dublin Senior Foundation, Friday Night Bridge Club and St. Augustus Couple's Club.

Ruppenthal is survived by her companion,

Lewis Acker of Dublin; sons Kirk Peterson and wife Claudia, and Eric Peterson and wife Micki; daughters Mary Stephenson and husband Donald, who works at the Laboratory, and Elizabeth Peterson; six grandchildren; her brother John Ruppenthal and his wife, Pat, and sister-in-law Lillian Ruppenthal.

In lieu of flowers, her family requests donations to the Tri-Valley Haven, P.O. Box 2190, Livermore, CA 94550.

NEWSLINE

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

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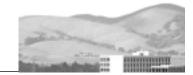
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Newsline 3 Friday, May 9, 2003

AROUND THE LAB



Cyclist to tackle 2,976 miles in Race Across America

By Anne M. Stark

NEWSLINE STAFF WRITER

When Rick Ashabranner goes out for a bike ride on June 15, it's not going to be any ordinary bike ride. It'll be the ride of a lifetime.

"I just go out for a bike ride and the next thing I know, it's 50 miles or 100 miles," said Ashabranner who works as a designer at the National Ignition Facility.

But come 7 a.m. on June 15, the lean 6-foot-5-inch Ashabranner

won't be going for a casual bike ride. Instead, he will be leaving San Diego as one of 16 male solo cyclists vying to be the first rider to bike 2,976.1 miles (including 82,350 feet of vertical climbing) across the United States in the Race Across America (RAAM) 2003.

RAAM is often described as more difficult than the Iron Man Marathon, and this year will include approximately 60 male and female solo riders, two-person teams and four-person teams competing for \$40,000 in cash and merchandise. RAAM 2003 starts in San Diego and finishes on the Atlantic City Boardwalk at Kennedy Plaza.

The elite group of athletes registered for the 2003 race includes entrants from Slovenia, Italy, Liechtenstein, Switzerland and Germany, as well as from throughout the United States. Some participants will ride as much as 20 hours or more a day in their quest to be first to cross the finish line.

For Ashabranner, cycling has been a lifelong obsession. Four years ago, he rode his first double century (200 miles) and became somewhat addicted.

"I got crazy and it (bike riding) just gravitated to the endurance racing," the Livermore resident said. "It just kind of happened. I figured why not give it a try."

That first double century involved 9,000 feet of vertical climbing. Ashabranner did it on a whim because "it was just something I could gain bragging rights to." But the humble Ashabranner would gain something he wasn't expecting during that first double century; he got an energy boost to push himself even further. Since that first one, he has completed



Rick Ashabranner

22 double centuries, added a triple (300 miles) and a quadruple (400 miles) and completed the Furnace Creek 508 (miles). That Furnace Creek Race is where he qualified to race solo in the RAAM

With a full time job and a family

(including "incredibly supportive" wife Irene and 8-week-old Megan), some might wonder how Ashabranner has time for training.

Besides riding at noon with the Cyclotrons, he logs in miles on weekends. "I might go for a 6hour ride on Saturday and a 9hour ride on Sunday," he said matter-of-factly. "As I get closer to the race, it's a progression of more miles and more hours."

To get an idea of Ashabranner's training regimen, take a look at a recent race. In the 2003 Davis 24-hour challenge earlier this year, Ashabranner came in first place completing 382 miles in 24 hours. Not only did he complete more miles than the other com-

petitors, but also he did it in a torrential downpour during 20 of the 24 hours. Temperatures varied from 42 degrees Fahrenheit to 70 degrees during that 24-hour time span.

Ashabranner won't be the only Lab employee on the trek come June. John Illige of R Division, will serve as crew chief while Rickey Hines and Tony Lee, both of the Engineering Directorate, will also be on the crew along with Michelle Cartmill and Judith Jolley.

Ashabranner's crew will follow 10 feet behind him across the country in a Sienna van lent by Toyota. They will handle the administrative tasks involved in the ride — logging miles, making sure



PHOTO COURTESY OF MIKE MALONEY

Ashabranner is eating enough and is hydrated, tracking the course and making hotel arrangements if necessary. But Illige sees his role as a bit larg-

"There are a series of challenges," he said. "I have to make sure Rick is physically prepared, emotionally prepared and we have to be ready for the unexpected. There are a tremendous number of unknowns."

In the past few weekends, Ashabranner has been selfimposing 24-hour endurance riding while his crew follows just as they will do during RAAM 2003.

While the \$40,000 prize serves as some incentive, Ashabranner said the main goal is to finish the race.

"If conditions allow and I'm feeling good, I want to shoot for a good finish," he said. "It will be a learning experience."

Spending so much time on a bike provides Ashabranner with plenty of time to think. If there's something he

needs to sort through, he has time to work it out and then move into the "zone."

"The saddle of a bike is a great place to just think," he said. "How often in our regular routines can we get several uninterrupted hours to do that?"

For further encouragement, Ashabranner's hometown of St. Peters, Mo., is on the route where he said his family will cheer him on.

While Ashabranner expects to bear most of the \$15,000 to \$20,000 cost, he is accepting donations. For more information on Ashabranner's quest, go to www.rickacrossamerica.com and for those interested in donating to help offset the cost, contact him at seayaker@juno.com.

Safety reminders for Laboratory bike commuters

[Because May is national "Bicycle Safety Month," the Lab's Traffic Safety Committee brings you this two-part series on safe bicycle commuting.]

By Sue Koopman

ES&H TEAM 2

(*Part 1 of 2*)

Whether you bike to work for fun, fitness or environmental reasons, some safety considerations are advised. For nearly 25 years I have biked to the Lab and here are some personal tips that I'd like to pass on that can make your bike commute safer and more fun.

Your bicycle

You don't need a fancy, lightweight, carbon-fiber bike to commute. Just make sure your bike is safe and mechanically reliable.

- If you're not mechanically inclined, a local bike shop can inspect your bike for a rea-
- Use a rear-view mirror. It can attach to your helmet, glasses, or handle bar. Be aware of traffic behind you.

Lights and reflectors

A proper headlight can cost more than \$400 or as little as \$35. When selecting the proper light remember that brighter with longer lasting batteries is best.

- Know your battery charge limitations and plan for backup. My light has no charge indicator, so I recharge often and carry a flashlight for emergencies.
 - If your headlight is not very bright, ride slower.
- A flashing little red strobe taillight is advisable. Mine has flashed for years using the original battery, and remains very visible. A white flashing L.E.D. light for the front is a good attention-getter for cross traffic — even on cloudy days or at twilight.
- Install about eight, evenly spaced, silver reflective tape strips along the sides of both rims. When approaching headlights reflect off the strips, they illuminate the entire rim.

Fenders

Fenders are a must, unless you plan to change your clothes when you arrive at work.

[Read next Friday's Newsline for the culmination of this article.]



AVAILABLE NOW THROUGH MAY 18

Basic First Aid & CPR Online Training Course

Free for the first 300 employees and/or families who log on

earn how to handle emergencies until professional help arrives

This two-hour training program is designed for people with little or no first aid training. It features interactive lessons and self-testing to present the basics of emergency care.

- Work at your own pace from Lab or at home.
- Log on 24-hours a day.
- Stop and re-start when you have time.
- Make it a family learning activity.

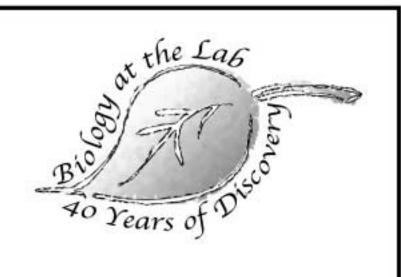
Follow these steps to log on:

- 1. Go to: http://www.safetycampus.com/livermore.cfm (the screen will say "Basic First Aid & CPR")
- 2. Fill in the information required (Note: For the address you can use 7000 East Ave. and 94551 for the Zip. For the telephone number you can use your Lab number.)
- 3. Enter your email address and create a password. At the bottom of the page, click "Submit Information."
- 4. Enter information on next screen (email address and password). This brings you to the start of the course.

You will receive an email confirming your registration and password and explaining how to return to the course quickly after stopping.

This course was developed by the National Safety Council and is being offered as part of the Lab's ongoing safety awareness effort. The course does not fulfill any Laboratory institutional training requirement, nor will course completions be entered into LTRAIN. No certification is given because there is no hands-on skill training.

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On May 21st, the Lab celebrates 40 years of biology.

Goodwin to lead hazardous waste division

Stephanie Goodwin has been selected as the Radioactive and Hazardous Waste Management (RHWM) Division Leader for the Environmental Protection Department (EPD), EPD Department Head Ellen Raber announced in a Administrative Memo Thursday.

"I am very pleased that Stephanie has accepted this position and I look forward to having her technical and management expertise in the RHWM Division Leader role," Raber said.

Goodwin, whose appointment is effective May 12, will be responsible for all aspects of waste management operations and will be responsible for ensuring all aspects of nuclear facility compliance. Her other responsibilities will include personnel administration, employee development, compliance with EPA hazardous waste regulations, compliance with DOE nuclear facility regulations, project management, budget development and cost control.

Goodwin received her Ph.D. from the University of Illinois, Urbana and started at the Laboratory in March 1989 in the Computations Directorate. Before coming to the Laboratory, she had been the Computing Information Section Leader at the Los Alamos National Laboratory. Goodwin transferred to EPD in March 1992 as the Environmental Training Manager. In that position, she was responsible for managing Laboratory-wide and departmental environmental training, including the design, development, implementation and evaluation of courses focusing on the collection, treatment, packaging and storing of hazardous, radioactive and mixed wastes.

For the last 3 years, Goodwin has been the RHWM deputy division leader. In that role she has provided excellent technical and administrative leadership and management to the division.

Technical Meeting Calendar



INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Understanding and Improving Whole-Program Locality," by Chen Ding, University of

Rochester. 10 a.m., Bldg. 451, room 1025 (uncleared area). Contacts: Bronis de Supinski (CASC) 2-1062, or Leslie Bills, 3-8927.

PHYSICS & ADVANCED TECHNOLOGIES

"Impact Delivery of Pre-Biotic Organic Matter to Planetary Surfaces," by Christopher D. Fassnacht, UC Davis. Noon, Bldg. 319, room 205 (uncleared area). Refreshments will be served. Contacts: Michael Gregg, 3-8946, or Sandra Maldonado, 3-0621.

CHEMISTRY & MATERIALS SCIENCE

"Dynamics of Materials: A B Division Perspective," by Kimberly S. Budil. 3:30 p.m., Bldg. 132 auditorium. (classified talk). Contact: Tom Felter, 2-8012, or Rebecca Browning, 2-5500.

MATERIALS SCIENCE & TECHNOLOGY

Seminar Series In Quantum Computation & Information. "Part III-Quantum Computation," by Sandu Popescu, University of Bristol. 1 p.m., Bldg. 219, room 163 (uncleared area). Contacts: Patrice Turchi, 2-9925, or Linda Bodtker, 3-0421.

DEFENSE & NUCLEAR TECHNOLOGIES

"The Use of NIF in Support of LLNL's Secondary Program," by Charles P. Verdon, 10:30 a.m., Bldg.. 111, room 114 (cleared area; SRD presentation; foreign nationals may attend). Contacts: Linda Stuart, 3-7001, or Frankie Springer, 3-6192.



PHYSICS & ADVANCED TECHNOLOGIES

"Centrality and Pseudorapidity Dependence of High-p_T Charged Hadron Production in

Au+Au Collisions at sqrt(s_NN)=130 GeV," by Yu Chen, UCLA. 1:30 p.m., Bldg. 211, room 227 (badge required). Contacts: Ron Soltz, 3-2647, or Pat Smith, 2-0920.

CHEMISTRY & MATERIAL SCIENCE

"The Rivalry of Three Dislocations and the Tricky Vacancy in NiAl," by Yong-Qian Sun,

Univ. of Illinois. 10 a.m., Bldg. 235, Gold Room. Contact: Mukul Kumar, 2-0600 or Rebecca Browning, 2-5500.



LIVERMORE COMPUTING

LC customers monthly meeting. 9:30 a.m, Bldg. 451, White Room (uncleared area). Contact: Teresa Delpha, taf@llnl.gov.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Automated Reconstruction of 3D City Models By Merging Ground-Based and Airborne Views," by Christian Frueh and Avideh Zakhor, University of California, Berkely. 2 p.m., Bldg. 451, room 1025 (uncleared area). Contacts: Samson Cheung, 3-2056, or Leslie Bills, 3-8927.

PHYSICS & ADVANCED TECHNOLOGIES DIRECTORATE

"Source Imaging Techniques," by David A. Brown. 1:30 p.m., Bldg. 2128, room 1000 (uncleared area). Contact: Ron Soltz, 3-2647.



DEFENSE & NUCLEAR TECHNOLOGIES

"Preparation of the Trinity Test, July 1945," by Ben Benjamin. 1:30 p.m., Bldg. 132 auditorium, room 1000.

Early Days: "Preparation of Little Boy and Fat Man Prior to the Atomic Bomb Drops on Japan," Tinian Island Presentation, by Leon Smith. 2:30 p.m., Bldg. 132 auditorium, room 1000. Contacts: Linda Stuart, 3-7001, or Frankie Springer, 3-6192.



PHYSICS & ADVANCED TECHNOLOGIES

"Cometary X-ray Emission & the Deep Impact Comet Mission," by Carey M. Lisse, University of Mary-

land. 2 p.m., Bldg 2128, room 1000 (uncleared area). Contacts: Peter Beiersdorfer, 3-3985, and Alan Wootton, 2-6533.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

Seminar Series In Quantum Computation And Information. "Part Iv-Quantum Computation II," by Sandu Popescu, University of Bristol. 1 p.m., Bldg. 319, room 205 (uncleared area). Contact: Patrice Turchi, 2-9925, or Linda Bodtker, 3-0421.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Quantum Information Science & Technology: DARPA's Vision," by Stuart Wolf, University of Virginia and DARPA. 3:30 p.m., Bldg. 543 auditorium. Contact: Elaine Chandler, 2-2482, or Dawn Brosnan, 4-5008.



PHYSICS & ADVANCED TECHNOLOGIES

"Gamma Ray Bursts: The Brightest Explosions in the Universe," by Shrinivas R. Kulkarni,

California Institute of Technology. Noon, Bldg. 319, room 205 (uncleared area). Refreshments will be served. Contacts: Michael Gregg, 3-8946, or Sandra Maldonado, 3-0621.

CHEMISTRY & MATERIAL SCIENCE

"Pushing the Limit: Experiments in Materials at Extreme Conditions," by John Molitoris. 2 p.m., Bldg. 235, Gold Room. Foreign Nationals may attend if appropriate security plan is on file which includes Bldg. 235. Contact: Christian Mailhiot, 2-5873, or Kathy Gonzales. 3-7023.

PHYSICS & ADVANCED TECHNOLOGIES

"Collision Geometry and High pT Suppression," by Jiangyoung Jia, State University of New York. 1:30 p.m., Bldg. 211, room 227 (badge required). Contacts: Ron Soltz, 3-2647, or Pat Smith, 2-0920.

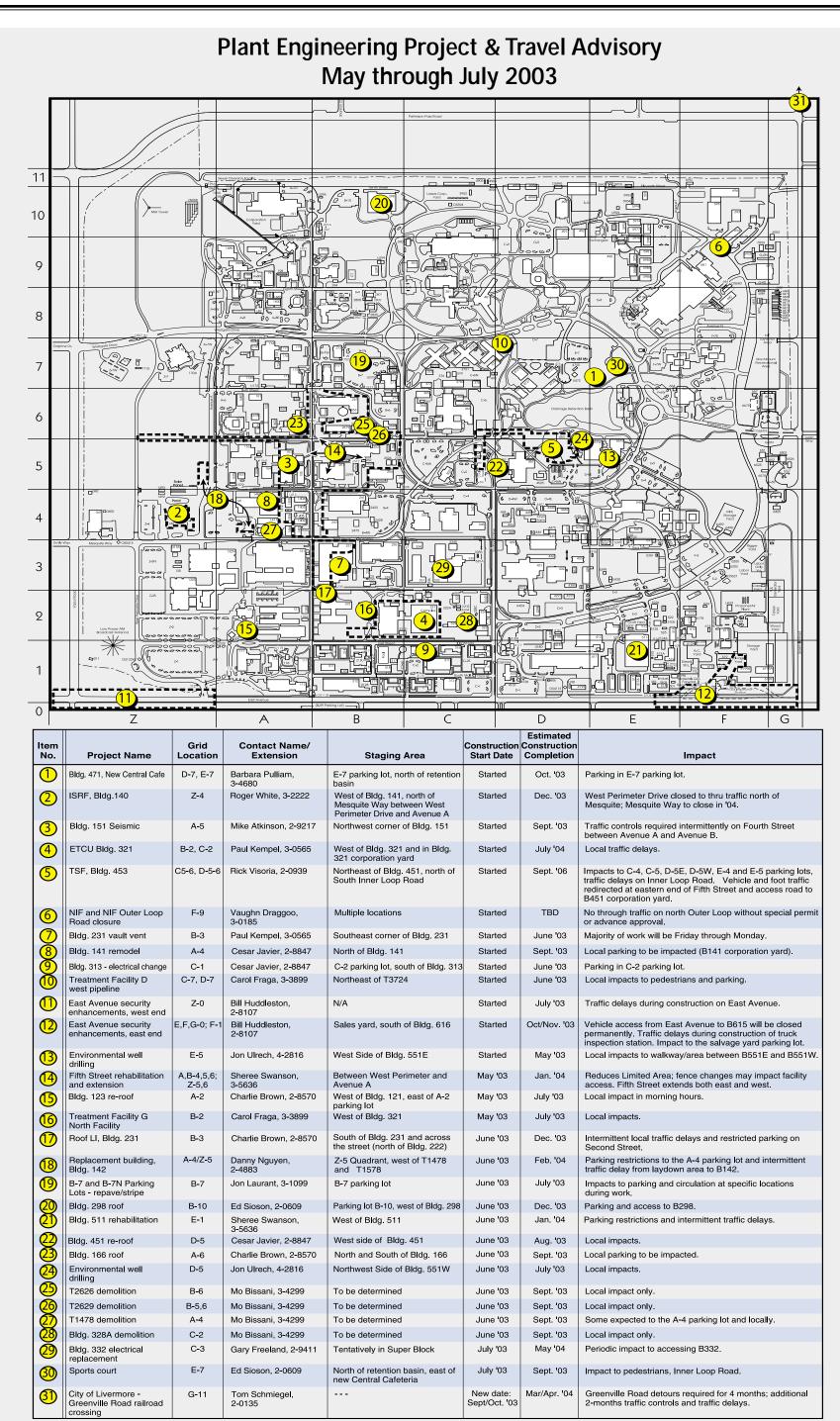
CHEMISTRY & MATERIAL SCIENCE

"Material Structures Produced By Dynamic Pressures And Material Properties Under Dynamic Pressures," by William J. Nellis, Physics & Advanced Technologies. 3:30 p.m., Bldg. 235, Gold Room. Foreign Nationals may attend if appropriate security plan is on file which includes Bldg. 235. Coffee and cookies will be served at 3:20 p.m. Contact: Tom Felter, 2-8012, or Rebecca Browning, 2-5500.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@IInl.gov.

Friday, May 9, 2003





CLASSIFIED ADS

See complete classified ad listings at https://www-ais.llnl.gov/newsline/ads/

AUTOMOBILES

1990 - 300zx Red 2+2 Great Condition Must see 158,000 miles. Extras. \$7500. 925-449-7480

1996 - 4Runner SR5 4WD. AT,CD, RunningBoards, RoofRack, TowPackage, Moon Roof,Power Doors/Windows.\$11,500 OBO 209-834-0114

1976 - Pontiac T/A restoration project, running but needs work. Many extras and all go with it. Serious inquiries only ... \$1500/BO 925-449-5018

1998 - Ford, Windstar GL, Silver, front/rear air (ice cold), excel cond., 45k mi., \$10,400 O.B.O. 209-952-5048

2001 - Toyota MR2 Spyder, Silver w/blk conv top, fully loaded, MUST SELL -925-634-8162

1995 - Saturn SL2 4-dr Sedan; 95K mi (fwy miles); Burgundy; 4 cyl; auto trans; good condition; orig. owner; \$3600. 925-292-9395

1995 - Saturn Type II 4 door, cream puff. 58k miles, air, auto, CD changer, orig. owner \$4600 925-455-9409

1992 - Ford Explorer XLT. 80k mi. Original owner - all receipts. Excellent Condition. 5spd/Tow. \$4900 obo. 925-240-

1994 - Honda Civic EX, ~135K miles, 5 Speed, AC, Cruise, CD, AM/FM, Dual Air Bags, Moon Roof, PW, PL, Alarm. In good condition. Great on Gas! \$4500 OBO 925-895-8868

2000 - Ford Contour 4 door SE V6 original owner 18,000 miles, dual air bags, spoiler, color white, tilt wheel, AT, CC, PS, AC, PW, PL Ex. condition \$9,000 925-606-9847

1997 - BMW, Z3 Roadster, 6 Cyl, 5 speed, 21,000 miles, Silver and Black, Excellent condition throughout! only \$19,500 925-779-17**56**

1993 - Jeep Wrangler 4x4, 5spd., 4.0L 6 cyl, 64K, very clean. \$5980 obo. 925-455-0623

AUTOMOBILE ACCESSORIES

Car alarm/keyless entry. new and unopened in box. \$50.00 or B/O. 209-825-7702

Alpine Power Amplifier 4/3/2 channel, MRV-F340 V12. Paid \$450.00 will sell for \$300. 925-997-0747

Heavy duty chain hoist. \$25.00 925-

Ford motor 1971 351 cleveland 2bl.C4 Trans runs good, \$500.00 obo. 209-522-4983

BICYCLES

Girls Bike- 5 speed, Pacific-Catalina (purple), 13 inch frame, excellent condition. Can bring to LLN for viewing. \$30.00 209-832-0765

BOATS

Bayliner Capri LS/SE, 1995, 20.5 feet, Merc 5.0L V8, Open Bow, bimini, boat cover, trailer, only 150 hours! Like New! \$11,500 925-779-1756

ELECTRONIC EQUIPMENT

Technique 3-way home speakers. 12 inch woofer. 26 inches in height & 14 inches wide. Dark wood. Been in storage for 8 years. Minimal usage. \$50. 925-964-0534

Cambridge Soundworks DTT3500 5.1 speakers with Dolby Digital/Surround Pro Logic decoder, and Creative Labs SoundBlaster Live 5.1 audio card. \$150 510-429-9260

6-in-1 USB card reader. Reads/Writes

CompactFlash, SmartMedia, IBM Microdrive, SecureDigital, MemoryStick, and MultiMedia cards. PC or Mac. \$15. 925-454-8827

Mac LC-III - good, reliable stand-alone computer w/ lots of software and games. Color display, removable hard disk, CDROM, faxmodem, printer. \$250. 925-443-1074

1965 vintage Dynaco SCA-35 Tube stereo integrated amp, 15 Wpc. Upgraded caps, other mods. Extra tubes included. Great tube sound! \$200 209-475-9650

2-MONITORS: 20 in. Apple excellent condition \$75 and 15 in. Apple in good condition \$25. 925-449-8131

Email station, Landel Mail Bug desktop unit, one yr old, like new; \$40 is less than half price; call aft-6pm please 209-832-2056

HOUSEHOLD

Queen sized Mediterranean bedroom set. Triple dresser, mirror, two night stands, chest, headboard. Good condition. \$450 BO 925-449-1128

Wooden bunkbeds with bookcase headboards \$100 209-823-0976

Sealy Posturepedic Sensation Pillow Top matress and box spring. Queen size. Less than 1 year old, \$400 OBO. 925-454-1439

Solid Oak Table, 42x42, 42x60 with leaf installed, 4 chairs, \$400, 925-455-0836

Two tiffany style glass 15 inches in diameter hanging lamps. White, gold & brown, brass chain over electric cord. \$10.00 each 925-447-1023

Cal King bed-in-a-bag, Dan River brand. Includes comforter, shams, & skirt. Dark, multicolored pattern. Excellent condition. \$40 OBO. 925-846-3653

4 piece American Tourister luggage. Good condition with locks and keys. \$45.00 510-582-2938

Scandinavian pedestal walnut dining table, 2 leaves, protective table pads, 8 chairs. All Excellent condition \$450. 925-895-7195

GE Range for sale. Used, but very clean and in working condition. Has four buners and an oven. \$100/OBO 209-612-8052

Oak corner entertainment center 84in fits most 36in TVs, never used \$1200; Modular Ethan Allen sofa with queen sleeper and recliner \$800 209-599-5571

French Door,standard slider openning (Pro-Bilt), Wood, Outward openning with side lights, never installed. New \$1400. Will sell for \$700.00 925-443

Exec. Desk, Solid Oak \$200/obo. Have digital pictures. 209-403-4942

Maple curio cabinet w/4 glass shelves and light. Excellent condition. \$200 obo 925-989-4131

22 inch self-propelled lawn mower. Used 3 seasons. \$30 obo. 925-240-

Sat 5/10/03 10am-3pm, Carnival at Almond Ave School. Food, Fun & Games for all ages. 925-449-6048

Cal King waveless waterbed pedastal style, 8 drssr drwers, cabinets, head-board w/shelves & mirror,heater,liner,mattress. Good condition, \$250 OBO, 925-373-2832

Oak bedroom headboard pier unit for Q-sized bed. Excellent condition. Lots of storage and lights. Digital photos available. \$400. 925-200-4475

14 cubic foot White Coldsport Frostless refrigerator by Sears. Freezer on top. Runs great. \$100.00 925-828-9378

MISCELLANEOUS

Darling antique repro bedroom set, dark wood, double bed w/hdbrd&ftbrd,

dresser w/mirror, 2 end tables, perfect for guest rm, BO 925-449-3499

Character cake pans - Thomas, Pokemon, Blues Clues, Minnie Mouse with instructions. Orig \$15, sell \$5 925-998-

Clothes, Boy/Girl 0-4, Name brands, gently used, great prices. Complete crib set bedding in excellent condition. 925-998-2620

Environmentally friendly products - save money and the environment. 408-739-1539

Kiln-Sitter-Classic 810 model. 120V high fire kiln. Firing Chamber= 11.5x9 inches .Comes with stand & interior shelves. \$150. Minimal usage. 925-964-0534

Office furniture,desk,chairs,filing cabinets,photo copier,pen plotter, bookcases,credenza,etc. In storage,gotta sell. No reasonable offers refused. 925-371-5203

Air compressor ingersol-rand 175 cfm runs great, lights and licened \$4500 209-239-6526

Camper & trailer windows, various sizes; \$50.00 for all. 925-516-2617

Farm Fresh Eggs For Sale \$2.50 / dozen. Free range hens with beautiful bright yellow yolks, bring kids by to see the flock. 925-447-2684

Basket Ball Hoop GREAT condition. Adjustable in height & Portable with a light up hoop! \$50.00 209-892-2369

Armoire, solid oak 7ft. x 6ft. 1930s \$2200/obo. Have digital pictures. 209-401-7562

Bike trailer for towing two kids. Excellent condition. Safety features. Attaches to bike at rear wheel. Folds away for storage. \$150 obo. 209-832-0913

1987 John Deere 850 24 HP w/roll bar and new loader, rebuilt motor by JD dealer. 7100 hours. Excellent condition \$11,000 OBO 925-449-5481

MASSAGING MAT, whole body, hydro, 5 motors, heat, unused only \$25 925-447-7070

4 piece American Tourister luggage. Good condition with locks and keys. \$45.00 510-582-2938

MOTORCYCLES

1991 Suzuki GS500e, Full tune-up, new F&R brakes, new fork seals, new rear tire - all last spring. Runs strong in town and on the freeway. Perfect for first-timer! The bike itself has 23k on it but the motor only has 5,500.\$1500 obo, 209-835-5851

1998 - Harley Davidson Road King, 13,500 miles, Concord Grape paint, perfect condition, 1,000 miles on new tires, \$16,500 OBO Home 209-772-

2002 - Suzuki DRZ400S, Dual Sport, Electric Start, Water Cooled, Four Stroke, Perfect Condition, Must Sell, \$4,375 925-443-3970

91 - Kawasaki 1500cc only 16K miles. Looks and runs great. Black w/pinstripes. Includes saddle bags, and 2 helmets. \$3200 OBO. 925-245-1414

2003 - Yamaha YZ 125, Pro Taper Bars, FMF Fatty Pipe/Sparky, Jetted, Works Connection Frame Guards, One Indusries Graphids. Only 10 Rides \$5500 OBO 925-595-1429

MUSIC INSTRUMENTS

Piano, Wurlitzer Spinet, excellent cond., \$890.00. O.B.O. 209-952-5048

Kohler & Campbell Upright Piano, \$300 925-292-1877

PETS & SUPPLIES

1 Dwarf rabbit color black with cage \$40, 1 grey Chinchillaw/cage & toy \$150, 1 Golden Day Geko, w/cage \$50 obo. 209-825-2048 German Short Haired Pointer. Male 8 months old. Current on all shots. Good with kids, very affectionate and a great hunting dog. \$200.00 OBO 209-832-0444

Horse for Sale, 16y.old Quarter gelding Western/English, Sound. \$2,200 OBO. Call after 5PM 510-889-1564

RECREATION EQUIPMENT

A bumper setup to carry a motorcycle. Heavy duty steel. \$25.00 925-447-

Treadmill-2 yrs old, excellent condition. 2 weights, water bottle and magazine slot. Incline & multiple routines. Folds for storage. \$400 obo. 925-989-4131

SADDLE: 17 inch Crosby Equilibrium All Purpose Saddle; excellent condition; \$1,000; call 925-634-2307

1992 Kawasaki 650SX stand-up Jetski. Excellent condition, no mods. Includes trailer and cover \$1000.00 209-825-0453

Mizuno irons, mens rh, progressive cavity PW-5, custom-matched 4.5 rifle shafts, standard lie/loft. still in box. \$250. 925-820-8158

RIDESHARING

Express your commute, call 2-RIDE for more information or visit http://www-r.llnl.gov/tsmp.

San Jose & Fremont-Mission - Space is available from San Jose and Fremont-Mission areas. Work hours: 7:30 to 4:30. 408-238-1909, ext. 3-3057

Orinda - Carpool from Lamorinda seeking 4th driver/rider. Meets at St.
Stephens and 24. Lab hours 8:15am to
5pm M-F. 925-253-0498, ext. 2-9823

Modesto - Vanpool, Modesto to LLNL. 7:00 to 3:30 shift. Has openings. Call 209-529-1010, ext. 3-0487

ROCKRIDGE - Looking for occasional/regular rides/riders. Work start&finish hours flexible. Barter rides or exchange gas money charge. 925-784-4133, ext. 4-2546

Lafayette - LaMOrinda Vanpool (also Walnut Creek stop at Rudgear Rd), reclining seats, reading lights, 7:45-4:45, \$100/mo (pretax reduction available) 925-943-6701, ext. 2-3005

SERVICES

Housecleaning Services, good references, call 925-292-0405

Web site building. Low LLNL rates. 408-739-1539

Yr round RV/boat storage. Easy access to 205/ 5, location near Tracy. Fee depends on size of space necessary. Space limited. 209-815-1415

SHARED HOUSING

Livermore - Avail. 6/1. Room w/ large closet, dual pane sliding door to huge backyard. Shared bath & kitchen. \$500/mo. includ. util. + \$250 dep. 925-243-9433

Dublin - 20 minutes from the Lab - Room available for rent, 600/month plus 1/3 utilities. 925-828-7343

Pleasanton - Room for rent. Private bathroom plus kitchen and laundry privileges; utilities included, cable ready. No pets, smoking or drugs, \$650.00. 925-426-0675

Livermore - Room for Rent (2), private or shared bath. Full privileges. Good east-side location. \$600 or \$500 respectively. 925-447-6218

TRUCKS & TRAILERS

1992 - Dodge Ram Van, Starcraft Conversion Pkg, 5.2 V8, 80k miles, Leather seats/fullpower/tow pkg, more extra. \$8,400/OBO 925-455-4666

1986 - 1986 Suzuki Samurai, 3 inch lift, nice tires and rims. Runs Great. \$2,400.00

209-835-7126

1998 - DODGE RAM 1500, 2 Door Laramie SLT, Long Bed, Extended Cab, Leather interior, Loaded Excellent Condition \$11,600.00 925-513-3806

1992 - 3.0L V6,4X4, 5 Spd, Dlx Xtra-cab, Alloy Wheels, Camper shell, Bed liner, Tilt, A/C, Pwr Steering, Pwr Brakes, in good running condition. 209-832-0474

1980 - Skamper 35 ft. trailer. Equipped with 75 solar, plus a 4000 Onan generator. A turn key setup for \$28,500 in Avery, CA. 925-447-7768

Lumber rack for late model GM full size pick-up with long bed; \$200.00 OBO. 925-516-2617

1997 - Tahoe LT, red, 4wd, fully loaded. American racing wheels, Rancho shocks, Borla sst dual exhaust. Excellent/73k mi. \$13K OBO 925-735-8765

1985 - Chevy Silverado, runs, needs TLC \$2,200.00 or BO. Pls. call Joey. 209-858-1160

4 LT style 16 inch. rims&tires from a 2003 Chevy Silverado. Brand new, never been used!\$1200 OBO 925-683-4347

1986 - Circle J Grande 2-horse trailer (extra tall & wide) good condition. \$1600 925-736-1463

VACATION RENTALS

Modern mountain house.4 bedr, 2bath.Wood burning stove, TV,VCR,DVD, nice deck. Washer/dryer. Hwy. 4, Arnold area(Dorrington),5000ft. 925-245-1114

Cute cottage beach house in Santa Cruz. 2 bedr. 2 bath, sleeps 7-8. 4 blocks to ocean. Available 6-14-2003. 925-245-

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful twoisland view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

MAUI-Kihei 1,2&3 bedroom condos. On beach, large pool, tennis courts, putting green, near golf course. Beautiful grounds, washer/dryer in units. 925-846-

PineCrest - (Off Sonora Pass Road), 3 bdrm/2 bath, frplc w/wood, microwave, dishwasher, pool table, large deck and view up No. Fork of Tuolumne, \$195/wknd. 925-449-5513

MAUI Kihei: 2-bdrm oceanfront condo, beautiful ocean view, white sandy beach, pools, tennis, snorkeling, near pro golf. Low LLNL rates. 925-846-1459

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, nicely furnished, All amenities, Park w/ Lake, tennis etc. Great for families! Reserve now for Summer! 209-599-4644

Solana Beach/Del Mar - Oceanfront condo, Delux 2br. 2 1/2 ba., Tennis, Pool, Jacuzzi, Fully Equiped, Gated and indoor parking, near San Diego attractions 925-443-2271

WANTED

Large pressure cooker or pressure canner. 209-914-6963

Wanted: Groups, Clubs, Organizations Interested In Doing Fund Raiser Activities. Call 925-373-9435 or 925-373-7434

Looking for a Health Rider. Fairly new or hardly used. Not above \$70.00 510-582-2938

Experienced Air Conditioning expert to move outside AC unit/electrical/and coolent to a different location. Livermore Residence. 925-454-9224

Bike Rack for Honda Civic. Reasonably priced. 209-403-4942

Services and merchandise listed in Newsline are not guaranteed. It is up to the buyer to scrutinize services purchased.

Friday, May 9, 2003 Newsline 7

Around the Lab



Cleanup of small Hawaiian island proves challenging

By Anne M. Stark

NEWSLINE STAFF WRITER

When most people think of military testing sites in the Pacific Ocean, the Marshall Islands or even Midway Island usually come to mind.

But what many people don't know is that the smallest of the eight major Hawaiian Islands served as a military ordnance-testing site for nearly 50 years.

Kaho'olawe Island, which sits just 7 miles off of Maui and 100 miles off of Oahu, was used by the U.S. Navy as a testing ground from 1941, when it was seized through Marshall Law, until 1990, when the first President George Bush ordered an end to all testing on the island.

On Thursday, Lab employees learned about the history and future of Kaho'olawe during a talk by Stanton Enomoto, senior policy advisor for the State of Hawaii Kaho'olawe Island Reserve Commission (KIRC). His presentation was sponsored by LLNL's Defense and Nuclear Technologies Directorate, in cooperation with the Lab's Asian Pacific American Council, as part of LLNL's Asian Pacific American Heritage Month activities.

Enomoto said that when the United States took control of the island in 1941, it was used as a weapons training center where "anything from Iwo Jima-type invasions to aerial bombardments" were conducted.

"This is probably the largest unexploded ordnance clean-up project in the United States," he said. "Everything was used out there except bio/chem or nuclear weapons so there are rockets, projectiles, bombs and all kinds of munitions."

When the testing finally stopped, KIRC was formed as an overseer of the island and began working with the Navy on the \$400 million cleanup and eventual return of the island back to Hawaii.

The 10-year clean-up project began in 1993 and is expected to be complete by November of this year, Enomoto said, even though only 19,500 acres of the agreed upon amount of 28,800 acres of land will be cleaned up by that

"It will be an incomplete cleanup by 2003," he said. "There has been no extension of the clean-up effort. Hawaii still feels there is a fed-



JACQUELINE McBride/Newsline

66

Everything was used out there except bio/chem or nuclear weapons so there are rockets, projectiles, bombs and all kinds of munitions.

- Stanton Enomoto

"

eral obligation to clean the entire island."

He said KIRC is working to secure more funding from multiple sources so one day the island will be free of all ordnance.

Of the cleaned up acreage, 19,500 acres will be surface cleansed of ordnance and debris

and 2,500 acres will be sub-surfaced (4 feet below ground level). However, most of the west end of the island will be a restricted area with an unknown amount of unexploded ordnance.

Once management control of Kaho'olawe is transferred back to the state (Kaho'olawe was kept under Navy control during the cleanup), Enomoto said KIRC is "seeking a very native Hawaiian approach to restoring the rest of the island," meaning environmental restoration, historical preservation, cultural practices and limited fishing will be kept in mind.

"The clean-up process is logistically challenging because of the lack of infrastructure on the island and geographic isolation," he said. Enomoto said there aren't established roads on the island so the clean-up effort has mainly consisted of bringing workers to different clean-up regions of the island via helicopter.

"There are also some technical limitations," he said. "There's no silver bullet in finding ordnance. There's never a 100 percent guarantee that the Navy found everything. That's something we need to realize when we take back Kaho'olawe."

Kaho'olawe was named for Kanaloa, one of four sacred Hawaiian gods and has been inhabited for more than 1,000 years mainly as a farming, fishing, and stone working community. It has been placed on the National Registry as an Archeological District and is significant for the native Hawaiian community.

In addition to historical and native artifacts found on Kaho'olawe, several threatened and endangered species inhabit the island and surrounding waters including the Hawaiian monk seal, humpback whales, the Blackburn Sphinx moth and Kanaloa Kaho'olawensis, a native plant of which only two exist in the entire world "and this is one of them," Enomoto said.

He said that groups wishing to visit Kaho'olawe once the island is transferred back to the state will have to go through KIRC.

"No one can enter within a two-mile radius of the island without permission," he said. Because unexploded ordnance may be in the ocean within that two-mile radius, snorkeling, diving and fishing are prohibited.

Lab researchers participate in carbon conference

More than a half dozen Lab researchers this week participated in the second annual conference in Alexandria, Va., on carbon sequestration, an international gathering of government officials and technical officials in the field.

The three-day conference focused on the innovation, science and technological advances necessary in carbon sequestration to make it a practical technology to help meet greenhouse gas reduction measures.

Carbon sequestration is a key component in President Bush's Climate VISION (Voluntary Innovative Sector Initiatives: Opportunities Now) program to reduce the projected growth in the nation's greenhouse gas emissions.

Atmospheric scientist Ken Caldeira participated in a technical discussion about the long-term effects of ocean carbon sequestration and a poster on ocean carbon storage options while other Lab attendees participated in poster sessions about sequestering flue-gas carbon using a wet limestone scrubber and a case study of a coal-based zero-emission power plant.

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- Work Group Prevention Services. From stretching programs to customized ergonomic support for groups in office and non-office environments, we are here to help. Call 2-ERGO.



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8 Newsline Friday, May 9, 2003



The back page

TROST

Continued from page 1

Wyoming, one of the nation's five largest document repositories. She also taught archival management at the University of Wyoming and the University of Connecticut

"Coming to the Laboratory offered an opportunity for me to take the archival principles and skills I've learned and apply them to the body of material here that needs to be organized," Trost said.

Her job is not only to organize the material already contained in the archives, but to develop protocols and systems for acquiring material and making it accessible to those who use the archives. In essence, archiving consists of "appraisal, preservation, description and service," she said.

While waiting for the "Q" clearance required to work unescorted in the archives, Trost familiarized herself with the Laboratory and developed policies and procedures for the archives. She finally took up residence in the Bldg. 439 archives in February of this year. "It was a bit frustrating," she admitted.

Among the challenges Trost and the archives staff face is how to appraise and store electronic media in a way that make them available in the future. "There are some big challenges," she said. "We have to have software to read old electronic media."

For example, the archives contains 5 1/4-inch floppies from the early '80s, "but now we need to find the media to read them."

The rapid evolution and succession of generations of software make it a challenge to keep electronic



JACQUELINE McBride/Newsline

Maxine Trost

media accessible to customers, Trost said. "But my top priority right now is to build a structure to make sure that we have the information in whatever format readily at hand for our customers."

Another priority is developing a process for documenting and storing the materials that come into the archive. "It's really important to know the origin of the material that comes to the archive and who sent it," she said, noting that in the past, materials have sometimes been simply left at archives with no contact information. "We need to work with researchers to decide what comes to the archives when a project is completed."

Trost is developing a more formal process she is piloting with the Biology and Biotechnology Research Program and the Magnetic Fusion Ener-

gy division.

An Oregon native, Trost is no stranger to the Bay Area. Before pursuing her studies in archiving, she worked as a computer technician in San Francisco.

The way the Laboratory archives started is very typical of how archives were started in the '50s and '60s, she said. "From the 1950s to now is not very long."

But the end of the Cold War and the evolution of scientific research missions at the Lab have lent new historical importance to the documents contained in the archive. "There's a lot of material on important Cold War issues," Trost said.

"There are many documents here of enormous interest on issues that are probably poorly documented elsewhere."

The development of physics was a defining element of 20th-century history, she said, adding that there seems to be general agreement the 21st century will see biology emerge

as a dominant scientific discipline.

The archive serves as an important production of the control of the contr

The archive serves as an important resource to current and future researchers in the decisions they make by providing a record of the past, she said, noting that by examining past scientific data, researchers can avoid repeating mistakes.

"There's also a record of experiments that were never completed simply because the technology wasn't there yet," Trost said.

This is the first in a series of articles about the archives. Upcoming articles will examine how the archives work, how to interface with the archives and case studies.

If you have material for the archives, please contact Trost at 2-6539.

KUCKUCK

Continued from page 1

"Thanks to your exceptional efforts, the National Nuclear Security Administration organization is now well defined and performing at a higher level. Your professionalism and dedication are the hallmark of your performance and have dramatically impacted and improved the Department of Energy."

Kuckuck was appointed acting principal deputy administrator for NNSA in June 2001, following a short retirement from the Lab. He worked with then NNSA Administrator John Gordon to "stand up" the organization and re-engineer operations for the complex. Following Gordon's departure to the White House, Kuckuck then joined

forces with Brooks, who replaced Gordon.

"His efforts will define an NNSA of the future," said Bill Barker, NNSA chief of staff, of Kuckuck's work.

Kuckuck's assignment with NNSA ended in December; he is currently serving as senior adviser to the University of California Vice President of Laboratory Management, Bruce Darling. A physicist with 38 years of technical and operational management experience at the Lab and the UC Office of the President, Kuckuck's expertise includes nuclear testing, treaty verification research and program management.

"Dr. Kuckuck has demonstrated exceptional commitment to public service, making untold personal sacrifices to maintain leadership focus and program schedules in meeting the administrator's and the President's management agenda," said Abraham. "He is most deserving of special recog-

nition for his extraordinary act of service."

The Secretary's Gold Award is the highest honor bestowed by the DOE. The award is given at the Secretary's discretion and consists of a gold medal, a lapel pin and wood-bound plaque. Previous recipients include the Laboratory, in honor of its 50-year anniversary, and Director Emeritus Edward Teller, who received his award last December from Secretary Abraham, during a special visit to the Lab. Teller was honored for his life's work.

JGI

Continued from page 1

Microbes, the oldest form of life on Earth, inhabit nearly every environment and can thrive under extreme conditions of heat, cold, pressure, and radiation. Although microbes represent the vast majority of life on the planet, more than 99 percent have not been cultured, and consequently their genomic diversity has been largely unrecognized and unutilized. By studying their DNA, scientists hope to find ways to use microbes to develop new pharmaceutical and agricultural products, energy sources, industrial processes, and solutions to a variety of environmental problems.

Diversa and JGI will sequence DNA from microbes living in environments such as deep-sea thermal vents, insect endosymbionts, soil from nuclear weapons manufacturing sites, and water collected by rainforest epiphytes such as bromeliads that grow on giant trees.

Diversa pioneered proprietary, genomics-based methods for discovering unexplored microbial diversity and recently received a patent for sequencing of mixed populations of microbial DNA directly from the environment, which is more efficient and effective than individually culturing and identifying microbes in the laboratory.

Diversa estimates that its gene libraries currently contain more than three million unique microorganisms, comprising a vast resource of genetic material.

The Joint Genome Institute, which played a leading role in the recently completed effort to determine the DNA sequence of humans, is one of the world's largest and most productive genome sequencing centers. As part of the U.S. Department of Energy's Microbial Genome Program, JGI has already sequenced more than 60 microbes, many of which have far-reaching implications for addressing such DOE mission challenges as the remediation of radioactive and hazardous waste sites, sequestering heat-trapping carbon from the atmosphere, and developing renewable energy sources.

JGI is jointly operated by Lawrence Livermore, Lawrence Berkeley and Los Alamos national laboratories.



Newsline UC-LLNL PO Box 808, L-797 Livermore, CA 94551-0808